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AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Listing of Claims:

1. (Currently Amended) A computer program product stored on a computer readable storage medium for maintaining data access during failure of a first controller in a multiple controller storage subsystem, the storage subsystem having an array of data storage devices and at least one other controller for managing the data storage, comprising computer readable program code for performing:
 - saving internal state information by the first controller;
 - pausing operation of the at least one other controller;
 - the at least one other controller saving internal state information without resetting at the time of pausing; and
 - continuing operation of the at least one other controller.
2. (Previously Presented) A computer program product as claimed in claim 1, wherein the first controller detects an error in the first controller which triggers the saving of the internal state information.
3. (Previously Presented) A computer program product as claimed in claim 1, wherein a host computer issues a transaction to the first controller which causes the first controller to save its internal state information.
4. (Previously Presented) A computer program product as claimed in claim 3, wherein the first controller resets after saving its internal state information.
5. (Currently Amended) A computer program product as claimed in claim 1, wherein the first controller instructs the at least one other controller to save the at least one other

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controller's internal state information and the at least one other controller pauses operation, saves internal state information at the time of pausing, and continues operation without resetting.

6. (Currently Amended) A computer program product as claimed in claim 1, wherein the at least one other controller pauses operation, saves internal state information at the time of pausing, and continues operation when the at least one other controller detects a loss of the first controller such that access to the array of data storage devices is maintained.
7. (Previously Presented) A computer program product as claimed in claim 1, wherein the first controller and the at least one other controller save their internal state information to a storage location in each controller.
8. (Previously Presented) A computer program product as claimed in claim 1, wherein the first controller and the at least one other controller save their internal state information to at least one storage device.
9. (Previously Presented) A computer program product as claimed in claim 1, wherein the first controller instructs the at least one other controller to transfer internal state information to the first controller.
10. (Previously Presented) A computer program product as claimed in claim 9, wherein the first controller saves the internal state information of the first controller and of the at least one other controller to the storage devices.
11. (Previously Presented) A computer program product as claimed in claim 1, wherein the first controller and the at least one other controller are combined on a single circuit card.
12. (Previously Presented) A computer program product as claimed in claim 1, wherein in addition to the internal state information, at least one of the first controller and the at least

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one other controller save external memory data.

13. (Previously Presented) A computer program product as claimed in claim 1, wherein the at least one other controller saves a subset of internal state information.
14. (Previously Presented) A computer program product as claimed in claim 1, wherein the internal state information saved by the at least one other controller is determined by an instruction received from the first controller.
15. (Previously Presented) A computer program product as claimed in claim 1, wherein problem analysis regarding an error in the first controller is carried out on the saved internal state information.
16. (Previously Presented) A computer program product as claimed in claim 1, wherein the storage subsystem comprises a Fibre Channel Arbitrated Loop system and the at least one other controller comprises a host bus adapter.
17. (Previously Presented) A computer program product as claimed in claim 16, wherein during the at least one other controller pausing operation, saving internal state information at the time of pausing, and continuing operation, interrupts are disabled.
18. (Previously Presented) A computer program product as claimed in claim 16, wherein a flag is set in a host bus adapter during the saving of internal state information to prevent overlapping saves of internal state information in that adapter.
19. (Previously Presented) A computer program product as claimed in claim 16, wherein the host bus adapter saves information relating to an interface chip.
20. (Currently Amended) A method for maintaining data access during failure of a first controller in a multiple controller storage subsystem, the storage subsystem having an array of data

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storage devices and at least one other controller for managing the data storage, the method comprising:

the first controller saving internal state information;
pausing operation of the at least one other controller;
the at least one other controller saving internal state information at the time of pausing without resetting; and,
continuing operation of the at least one other controller.

21. (Previously Presented) A computer program product as claimed in claim 8, wherein the internal state information is subsequently retrieved from the at least one storage device.

22. (Previously Presented) A computer program product as claimed in claim 1, wherein the first controller and the at least one other controller share a single memory.

23. (Currently Amended) An apparatus for maintaining data access during failure of a first controller in a multiple controller storage subsystem, the storage subsystem comprising at least one other controller for managing the data storage, the apparatus comprising:

the first controller comprising a buffer means for storing internal state information; and,

the at least one other controller comprising means, responsive to failure of the first controller, for pausing operation, saving internal state information at the time of pausing without resetting, and continuing operation.

24. (Previously Presented) A storage subsystem comprising at least two controllers for managing data storage, the at least two controllers coupled to at least one data storage device, the storage subsystem further comprising:

a first controller of the at least two controllers adapted for saving internal state information during a failure of the first controller; and,

at least one other controller of the at least two controllers adapted for pausing operation, saving internal state information at the time of pausing, and continuing

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operation during the failure of the first controller, wherein only the first controller resets.

25. (Previously Presented) A storage subsystem as in claim 24, wherein an interface to at least one of the first controller and the at least one other controller comprises one of a SCSI, a Fibre Channel Arbitrated Loop and a SSA interface.
26. (Previously Presented) A storage subsystem as in claim 24, wherein at least one of the first controller and the at least one other controller comprises a memory buffer.
27. (Previously Presented) A storage subsystem as in claim 24, wherein the first controller and the at least one other controller share an external memory.
28. (Previously Presented) A storage subsystem as in claim 24, wherein at least one of the first controller and the at least one other controller are disposed on a single circuit card.
29. (Previously Presented) A storage subsystem as in claim 24, wherein each of the first controller and the at least one other controller comprise a processor.
30. (Previously Presented) A storage subsystem as in claim 24, wherein the storage subsystem comprises a Fibre Channel Arbitrated Loop system and the at least one other controller comprises a host bus adapter.
31. (Currently Amended) A Fibre Channel Arbitrated Loop storage system comprising:
a first set of disk drives connected to a first set of loops, and a second set of disk drives redundant with the first set of disk drives and connected to a second set of loops; wherein a first adapter is connected to the first set of loops and a second adapter is connected to the second set of loops; each adapter being adapted for issuing a command to the other adapter to save internal status data without resetting and each adapter adapted for saving internal status data and resetting.